Exhibit No. 16 B

## **National Transportation Safety Board**

Washington, DC

January 27, 2010

Wildlife Factors Group Chairman Factual Report

Update to Attachment 1: Smithsonian Institute Feather Lab Analysis (10 pages)

	no feather	0	0	no feather	0	0	unsuccessful	no identification	piece of tissue with hair?	4
No feather and no DNA in sample	no feather	0	0 0	% % % feather feather	unsuccessful 0	unsuccessfu	unsuccessful	identification no identification	snarge Left wing #5 slat, piece of tissue with hair?	ω
Feather microstructure in slide 1 contained a very good sample of duck down. This is probably an old, unreported birdstrike.	no feather	no feather	70 feather		unsuccessful	unsuccessful	unsuccessful	Duck (Anas species)	Left wing #5 slat, feather?	N
DNA results = weak 95.6%; feather microstructure is Columbiformes (pigeon/dove). Columbiformes (Pigeon) is probably an old, unreported birdstrike.	no feather	To feather	Collinbitonnes		unsuccessful	Branta canadensis	unsuccessful	Canada Goose?; Pigeon/Dove	Left wing #5 slat,	<b>-</b>
Comments	Whole	Microscope 3	Microscope ?	Microscope 7	DNA3	DNA 2	DNA 1	Bird Identification	Location	Вад
						iosser	Begier, Allen Gosser	k George, Mike	Collectors: Candace Kolander, Mark George, Mike	Collectors: Can
								Varehouse	Location: FBI Evidence Recovery Warehouse	Location: FBI E
										1000 to 1130
									ry 19, 2009	Monday, January 19, 2009
							-			

	Engine skin, feather and possible snarge	8		·		ileceous feather	*			Inconsistent results for positive identification. Feather microstructure is possibly waterfowl but not diagnostic for identification conformation with
Notes: inspecte	7 smear identification  Notes: inspected hatch doors with nothing found.		Anas sp. unsuccessful unsuccess	unsuccessful many miscellar	unsuccessful neous	Plu	0	0	no feather	DNA.
Monday, January 19, 2009	y 19, 2009									
1300 to 1545				-						
Location: Aircra	Location: Aircraft at Weeks Recovery	yy								
Collectors: Can	Collectors: Candace Kolander, Mark George, Mike Begier, Allen Gosser	k George, Mike	Begier, Allen G	osser						
Bag	Location	Bird Identification	DNA 1	DNA 2	DNA3	Microscope 7	Microscope 2	Microscope 3	Whole feather	Comments
8 male	Engine #2, blade 24, inboard on the mid span shroud, snarge	Canada Goose	Branta canadensis	0		O Stanta Canadansis	0	0	no feather	Three different DNA primers yeilded same result. DNA = 100%
9 (no sex)	Engine #2, blade 26, inboard on the mid span shroud, feather particles	Canada Goose	Branta canadensis	0		O the canadensis	0	0	no feather	Two different DNA primers yeilded same result, DNA = 100%
10	Engine #2, blade 27, inboard on the mid span shroud, feather particles	no identification	0	0		no featifier	0	0	no feather	Insufficient material in sample for DNA analysis
-1	Engine #2, blade 4, smear	no identification	unsuccessful	0		O Dennace City	0	0	no feather	Pennaceous feather fragment only, not diagnostic for identification purposes

	Engine #2, blade 3, possible small		Branta			No adensis				Two different DNA primers
12 male	feather	Canada Goose	canadensis	0	0	Brank Canad	0	0	no feather	yeilded same result, DNA=100%
	on director strip, mussel	no				<b>С</b> У	ather.	delher.		No feather and no DNA in sample: three unsuccessful
	Left wing, middle	identification	disaccessial disaccessial	unauccessiui	ullauccessiul	a <sub>s</sub>		78	no reather	attempts.
14 female	flap track, intact feather	Canada Goose	Branta canadensis	Branta canadensis	0	Blanka canadens	0		Branta canadensis	Whole feather in sample; DNA = 100%
		<u>.</u>		i		7 P	Scope 2	Scope 3		
Bag	Location	Identification	DNA 1	DNA 2	DNA3		Micro	Micro	feather	Comments
	Just aft of radome									
'n	snarge with	no				feather.	feather.			No feather and no DNA in sample; three unsuccessful
	inside radome,	a chancanon	diedocceeidi	ulledecessiai	unsuccessiui		70	0	no reatner	attempts.
-	mollusc									No feather and no DNA in
16	ide	no identification	unsuccessful unsuccessful	unsuccessful	0	0	0	0	no feather	sample; three unsuccessful attempts.
										Passeriformes (songbird). No DNA obtained from three
	underside of						, Onnes	, Ormes		separate sampling attempts. All three microscopic slides have passerine barbules. Most
17	radome exterior, snarge	Passeriformes	unsuccessful	unsuccessful	unsuccessful	D. D. D. S. C.	A RESERVE	A ASS BY	no feather	probably an old, unreported birdstrike.
Tuesday, January 20, 2009	y 20, 2009							-		
0900 to 1415										
Location: Aircraft	Location: Aircraft at Weeks Recovery	Ŋ								
Collectors: Evely	Collectors: Evelyn Martinez, Mark George, Mike Begier, Allen Gosser	eorge, Mike Beg	jier, Allen Goss	ser						

DNA three attempts.	canadensis	0	0	Ø,	unsuccesstul	unsuccessful	unsuccesstul	Canada Goose unsuccessful unsuccessful unsuccessful	ragments)	77
Whole feathers in sample; No	Branta			Atta Canadansis					(Dolbeer 3/6) OGV outer flow 3 o'clock ALF (feather	
Whole feathers in sample; DNA = 100%	Branta canadensis	0	0	& Range Canadensis	0	Branta canadensis	Branta canadensis	Canada Goose	(Dolbeer 2/6) wedged between OGV platforms outer flowpath 3 o'clock (feather fragments)	21 (no sex)
Whole feathers in sample; DNA = 100%	Branta canadensis	0	0	the canadensis	o	Branta canadensis	Branta canadensis	Canada Goose	(Dolbeer 1/6) bypass OGV platform, outer flowpath 3 o'clock ALF (whole feather)	20 (no sex)
Comments	Whole feather	Microscope 3	Microscope 2	Microscope 7	DNA3	DNA 2	DNA 1	Bird Identification	Location	Bag
						₹. Dolbeer	Samples collected By R. Dolbeer		Thursday, January 29, 2009 - Engine #1.	Thursday, Janu
DNA=100%	feather fragments	0	0	Q <sub>e</sub>	0	0	Branta canadensis	Canada Goose	part of left wing middle flap track with feather fragments	19 female
Whole feather in sample; DNA = 100%	Branta canadensis	0	0		Branta canadensis	Branta canadensis	Branta canadensis	Canada Goose	Left wing, middle flap track, intact feather, meat sample, feather fragments	18 female
Comments	Whole	Microscope 3	Microscope 2	Microscope 7	DNA3	DNA 2	DNA 1	Bird Identification	Location	Bag

29 female	28	27 female	26 female	Bag	Tuesday - Thur	25	24 female	23 female
Eng.#1 03:00 OGV area	Eng.#1 7:30 OGV area platform	Eng.#1 8:30 OGV Vane platform	Eng.#1 11:30 OGV Vane platform	Location	Tuesday - Thursday 3-5 February 2009, Engines #1 and #2.	(Dolbeer 6/6) fan blade flowpath (mollusk shells)	(Dolbeer 5/6) 3 o'clock ALF under FAP at OGV L.E. outer flowpath (bone and feather frag.)	(Dolbeer 4/6) OGV outer flow 3 oclock (feather fragments)
Canada Goose	Canada Goose unsuccessful	Canada Goose	Canada Goose	Bird Identification	2009, Engines #	Duck (Anas species)	Canada Goose	Canada Goose
Branta canadensis	unsuccessful	Branta canadensis	unsuccessful	DNA 1		Anas sp.	Branta canadensis	Branta canadensis
0	0	0	unsuccessful	DNA 2	Sampled by Richard Dolbeer	unsuccessful	Branta canadensis	Branta canadensis
0	0	0	0	DNA3	d Dolbeer	unsuccessful	0	0
Sianta Canadensis	Stanta Canadensis	& Canadensis		Microscope ,		no feather	Ø <sub>g</sub>	Ganadensis
0	0	0	0	Microscope 2		0	0	0
0	0	0		Wicroscope 3		0	0	0
no feather	no feather	Whole feather	no feather	Whole feather		no feather	no feather	no feather
DNA = 100%		DNA = 100%	possible bone in sample	Comments		Mollusk shells in sample, no feather found. Anas species identification possible from river bottom contamination in bivalve.	DNA = 100%	DNA = 100%

	feather fragments	0	0	O Stanta Canadensis	0	0	Canada Goose	Eng.#1 12:30 OGV under vane platform Can	En OC 48 pla
	feather fragments	0	0	O Stanta Canadensis	О	0	Canda Goose	Eng.#1 12:00 OGV under vane platform Can	En OC 47 pia
	feather fragments	0	0	O Stanta Canadensis	О	0	Canada Goose	Eng,#1 10:00- 10:30 OGV under vane pannel Cana	10 46 va
	feather fragments	0	0		0	0	Canada Goose	1 04:00	Eng.#
Comments	Whole	Wicroscope 3	Microscope 2	70 <sub>0</sub> 7	DNA3	DNA 2	Bird Identification DNA 1	Bird Location Iden	Bag
	feather fragments	0	0	O Stanta Canadanais	0	0	Canada Goose	Eng.#1 04:00 OGV under acoustic panel Can	En 00
	feather fragments	0	0	O Granta Canadensis	0	0	Canada Goose	1 03:00 acoustic	Eng.# under 43 panel
large sample of feather fragments	feather fragments	0	0	O OF THE CARACLE PAIS	0	0	Canada Goose	£1 03:00	Eng.#
	feather fragments	0	0	O Stanta Canadensis	0	0	Canada Goose	Eng.#1 03:00 OGV underside Can:	41 OC
	feather fragments	0	0	O Granta Canadensis	0	0	Canda Goose	Eng.#1 03:00OGV under can	40 En
large sample of feather fragments	feather fragments	0	0	O Stanta Canadensis	0	0	Canada Goose	Eng.#1 03:00 OGV area Can	39 En

	feather fragments	0	0	O Stanta Canadensis		0	0	Canada Goose	Eng.#2 04:00 AFT acoustic panel	57
	feather fragments	0	0	O Branto Canadensis	0		0	Canada Goose	Eng.#2 04:300GV platform	56
small piece of feather	feather fragments	0	0		0		unsuccessful	Canada Goose	Eng.#2 03:30 under OGV platform	55
Comments	Whole	Microscope 3	Microscope 2	Microscope 7	DNA3	DNA 2	DNA 1	Bird Identification	Location	Bag
DNA = 100%	no feather	0	0	O Stanta Canadensis	0	0	Branta canadensis	Canada Goose	forward flange booster snap OD 0200	54 female
DNA = 100%	feather fragments	0	0	O Stanta Canadensis	0		Branta canadensis	Branta Canada Goose canadensis	Eng.#1 IVG faring	53 female
DNA = 100%	no feather	0	0	O Orania Canadelasis	0		Branta canadensis	Canada Goose	Eng.#1 Booster inlet outer diameter of booster shroud at 0400,point of core damage	52 female
DNA = 100%	no feather	0	Stanta Canade	8	0		Branta canadensis	Canada Goose	Eng.#1 LP stage 4 fan blade at 1200	51 female
no feather found in sample; fiber, not feather found in sample	no feather	0	no feather		0		unsuccessful	no identification	Eng.#1 LP stage 5 rotor blade 9	50
DNA = 100%	no feather	0	no feather	O Po Feather	0		Branta canadensis	Branta Canada Goose canadensis	Eng.#1 LP stage 4 rotor blade 15	49 male

	feather fragments	0	0	O Branto Canadensis	0		0	Canada Goose	Eng.#2 04:00 booster vane IGV Canada Goose	67 male
	feather fragments	0	0	O Stanta	0		0	Canada Goose	Eng.#2 Booster IGV 04:00 inlet guard	66 (no sex)
	feather fragments	0	0		0		0	Canada Goose	Eng.#2 base of cowling around OGV platform 06:00	65
Comments	Whole feather	Microscope 3	Microscope 2		DNA3	DNA 2	DNA 1	Bird Identification	Location	Bag
no feather found in mud sample	no feather	0	0	O No featiller	0		unsuccessful	no identification	Eng.#2 Sample from mud	64
	feather fragments	0	0	O Stanta Canadensis	О		unsuccessful	Canada Goose unsuccessful	Eng.#2 11:00 under OGV platform	63 male
	feather fragments	0	0	O Stanta Cenadeneis	0		unsuccessful	Canada Goose unsuccessful	Eng.#2 OGV platform 11:00	62 male
	feather fragments	0	0	O Stanta Canadansis	0		0	Canada Goose	Eng.#2 08:00- 08:30 OGV Platform	61 male
	feather fragments	0	0	O Stante Canadante	0		0	Canada Goose	Eng.#2 0:700 OGV	60
large sample of feather fragments	feather fragments	0	0	O Stanta Canadensis	0		0	Canada Goose	Eng.#2 06:00 under OGV platform	59
	feather fragments	0	0	O Stanta Canadensis	0		0	Canada Goose	Eng.#2 0:500- 0530 OGV platform	58

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received from Les McVey 20 April	feather fragments	9	0	O Stanta	0	0	Canada Goose	Eng.#2 combuster	69
	feather fragments	0	0	O Stanta Canadansis	0	0	Canada Goose	Eng.#2 04:00 Booster OD splitter faring ID	68